

What is claimed is:

1. A method for controlling a telecommunications system, comprising:
transmitting, over a communication line in a packet-based network, a message from
a controller to a communication interface between one or more telecommunication devices
and the controller or from the communication interface to the controller, the message
including a message identifier and data; and
5 processing the data in a predetermined manner based on the message identifier.
2. The method of Claim 1, wherein the message identifier identifies at least one
of a type and index corresponding to a message.
3. The method of Claim 1, wherein the message identifier is at least one of a
numeric and alphanumeric symbol.
4. The method of Claim 1, wherein the message identifier refers to at least one
of a flow control message, a control message, a fault code message, a counter value message,
an initialization message, a link update message, a command message, and a response
message.
5. The method of Claim 1, wherein the transmitting step includes adding at least
one of packet control driver/packet interface header information, intermodule link header
information, transmission control protocol header information, Internet protocol header
information, and ethernet header information.

6. The method of Claim 1, wherein processing step includes processing at least one of packet control driver/packet interface header information, intermodule link header information, transmission control protocol header information, Internet protocol header information, and ethernet header information.

7. A telecommunications system, comprising:

means for controlling a plurality of telecommunications subsystems, each telecommunications subsystem including:

a plurality of telecommunications devices and

5 one or more interface means for interfacing between the plurality of telecommunication devices and the controlling means; and

network means for networking the controlling means with each of the telecommunications subsystems.

8. The system of Claim 7, wherein the plurality of telecommunications devices including a plurality of telephones.

9. The system of Claim 7, wherein the controlling means includes a packet control driver.

10. The system of Claim 7, wherein the one or more interface means include one or more packet interfaces.

~~11.~~ A telecommunications system, comprising:

a controller for controlling a plurality of telecommunications subsystems, each telecommunications subsystem including:

a plurality of telecommunications devices and

5 one or more communication interfaces for interfacing between the plurality of telecommunication devices and the controller; and

a communication line connecting the controller with each of the telecommunications subsystems to form a network.

12. The system of Claim 11, further comprising a first memory accessible by the controller, the memory including one or more flow control counters.

13. The system of Claim 12, further comprising a second memory accessible by a processor in the communication interface, the second memory including one or more buffer status counters.

14. The system of Claim 13, wherein the one or more flow control counters indicate one of a memory capacity in use and a free memory capacity and the one or more buffer status counters indicate the other of the one of a memory capacity in use and a free
memory capacity.

~~15.~~ A method for operating a telecommunications system, comprising:

receiving a message from a telecommunication component;

determining whether a memory capacity assigned to a grouping of links is sufficient
5 to contain the message; and

transmitting the message when the memory capacity is sufficient to contain the
message.

16. The method of Claim 15, further comprising:

determining whether a memory capacity assigned to a link is sufficient to contain a
message;

5 transmitting the message when both the memory capacity assigned to the grouping
of links and the memory capacity assigned to the link are each sufficient to contain the
message; and

applying back pressure to the telecommunication component when at least one of the
memory capacity assigned to the grouping of links and the memory capacity assigned to the
link are insufficient to contain the message.

17. The method of Claim 16, further comprising incrementing a link counter
related to the link and a group counter related to the grouping of links when both the
memory capacity assigned to the grouping of links and the memory capacity assigned to the
link are each sufficient to contain the message.

18. A telecommunications system, comprising:

receiving means for receiving a message from a telecommunication component;

determining means for determining whether a memory capacity assigned to a grouping of links is sufficient to contain the message;

5 transmitting means for transmitting the message when the memory capacity is sufficient to contain the message.

19. The system of Claim 18, further comprising:

determining means for determining whether a memory capacity assigned to a link is sufficient to contain a message;

5 transmitting means for transmitting the message when both the memory capacity assigned to the grouping of links and the memory capacity assigned to the link are each sufficient to contain the message; and

applying means for applying back pressure to the telecommunication component when at least one of the memory capacity assigned to the grouping of links and the memory capacity assigned to the link are insufficient to contain the message.

20. The system of Claim 18, further comprising incrementing means for incrementing a link counter related to the link and a group counter related to the grouping of links when both the memory capacity assigned to the grouping of links and the memory capacity assigned to the link are each sufficient to contain the message.

5

21. A method for managing a telecommunications system, comprising:
receiving a message; and

at least one of incrementing or decrementing a counter in response to the message,
the counter being related to the capacity of a memory accessed by a telecommunications
component.

22. The method of Claim 21, wherein the counter includes at least one of a group
counter related to a grouping of links and a link counter related to a specific link and the
group counter tracks a memory capacity assigned to the grouping of links and the link
counter a memory capacity assigned to the specific link.

23. A telecommunications system, comprising:

receiving means for receiving a message; and

processing means for at least one of incrementing or decrementing a counter in response to the message, the counter being related to the capacity of a memory accessed by a telecommunications component.

5

24. The system of Claim 23, wherein the counter includes at least one of a group counter related to a grouping of links and a link counter related to a specific link and the group counter tracks a memory capacity assigned to the grouping of links and the link counter a memory capacity assigned to the specific link.

25. A method for operating a telecommunications system, comprising:

determining whether a counter is the same as or exceeds a predetermined level, the counter being related to a memory capacity of a computational component;

when the counter is the same as or exceeds the predetermined level, transmitting an
5 update message to a second computational component; and

when the counter is not the same as or in excess of the predetermined level, delaying the transmission of the update message to the second computational component.

26. The method of Claim 25, further comprising before the determining step receiving an acknowledge message from a telecommunications device.

27. The method of Claim 25, wherein the counter includes at least one of a group counter related to a grouping of links and a link counter related to a specific link and the group counter tracks a memory capacity assigned to the grouping of links and the link counter a memory capacity assigned to the specific link.

28. The method of Claim 25, wherein the counter includes at least one of a group counter related to a grouping of links and a link counter related to a specific link and the group counter tracks a memory capacity assigned to the grouping of links and the link counter tracks a memory capacity assigned to the specific link and further comprising incrementing or decrementing the counter to indicate an unused portion of the memory capacity.

29. A telecommunications system, comprising:

determining means for determining whether a counter is the same as or exceeds a predetermined level, the counter being related to a memory capacity of a computational component;

5 transmitting means for transmitting an update message to a second computational component, when the counter is the same as or exceeds the predetermined level; and

delaying means for delaying the transmission of the update message to the second computational component when the counter is not the same as or in excess of the predetermined level.

30. The system of Claim 29, further comprising receiving means for receiving an acknowledge message from a telecommunications device.

31. The system of Claim 29, wherein the counter includes at least one of a group counter related to a grouping of links and a link counter related to a specific link and the group counter tracks a memory capacity assigned to the grouping of links and the link counter a memory capacity assigned to the specific link.

32. The system of Claim 31, further comprising means for incrementing or decrementing the counter to indicate an-unused portion of the memory capacity.

33. A flow control message for updating a flow control counter, comprising:

a first field for holding a link identifier for a specific link between telecommunications components;

5 a second field for holding a group identifier for a grouping of links between telecommunications components;

a third field for data corresponding to the link identifier; and

a fourth field for data corresponding to the group identifier.

34. The flow control message of Claim 33, further comprising a record field for a number of records contained in the message.

35. The flow control message of Claim 33, wherein the data in the third and fourth fields relates to a number of packets that have been acknowledged by a telecommunication component.